

PUBLIC HEALTH REPORT

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Recent Developments in Immunization

New Immunization Legislation

In March, 1972, legislation became effective requiring children in day nurseries, nursery schools, and child care centers and children entering California schools for the first time to be immunized against diphtheria, tetanus, and, for children less than seven years old, pertussis.¹ This is in addition to the requirements for poliomyelitis and measles (rubeola) immunizations which have been in effect for some years.^{2,3} Provisions are made for exemption on the basis of medical contraindications or religious belief.

The major impact of the legislation will be felt with the opening of school this fall. Survey data indicate that 25 to 30 percent of those entering school for the first time will need some immunization to comply with the law. Request to physicians for the newly required immunizations will provide an opportunity to review each child's immunization status and correct deficiencies.

Immunization Needs

Immunization levels among the childhood population in California are generally high.⁴ The cooperative efforts of private physicians, local public health departments, and the State Department of Public Health have achieved strong ongoing immunization programs. Special intensi-

fied efforts have been conducted in turn against poliomyelitis, measles (rubeola), and rubella as the new vaccines have become available, so that they could be given within a short period to a major proportion of the susceptible population. Despite these generally successful efforts, some substantial areas of need remain.

Measles (Rubeola)

Intensified immunization campaigns against measles were conducted throughout California during 1967 and 1968. There was a resultant marked decrease in statewide measles morbidity, with 1969 having the lowest reported measles incidence in California history: 916 cases reported or a case rate of 4.5 per 100,000 population compared with an average of 35,000 cases in pre-vaccine years.⁵ Following the completion of the intensified campaigns, immunization efforts against rubeola slackened somewhat.⁶ A gradual increase in rubeola morbidity followed in 1970 and 1971. The 1972 rubeola "season" showed a continuation of the increased incidence and, for the first time in three years, there was extensive rubeola epidemic activity in California. This was most dramatic in Los Angeles County, but several other counties also experienced major rubeola outbreaks.⁷ While there is no reason to expect a return to pre-vaccine incidence levels, unless concerted efforts are made to assure immunization of preschool age children it can be expected that incidence will continue at an unnecessarily high level and sporadic major outbreaks will occur.

School-age children are relatively well immunized against rubeola as the result of the intensified campaigns and the immunization requirement for school admission. The major deficiencies are in the preschool age group, especially in economically disadvantaged and ethnic minority groups.⁸ Cases also have occurred in children

who were immunized prior to their first birthday and in some who received vaccine and gamma globulin at the same time. Continuing surveillance of vaccine efficacy emphasizes, however, that the vaccine is more than 90 percent effective. Unimmunized children have been predominantly involved in the outbreaks.⁹

Physicians are urged to immunize children as soon after their first birthday as possible and to consider re-immunizing children who may have been immunized at nine months of age or less.

Atypical measles, sometimes severe, with a variable rash, peripheral edema and pneumonia, has occasionally followed exposure to natural measles in children inoculated five to six years previously with inactivated measles virus vaccines. Untoward *local* reactions, such as induration and edema, have been observed at times when live measles virus vaccine was administered to persons who had previously received inactivated vaccine. Despite the risk of local reaction, the Public Health Service's Advisory Committee on Immunization Practices recommends that children who have previously been given only inactivated vaccine should be revaccinated with live vaccine to avoid the severe atypical form of natural measles and to provide full and lasting protection.¹⁰

Poliomyelitis

California continues to be free of poliomyelitis. There is evidence that immunization levels against poliomyelitis are decreasing somewhat, however, so the reintroduction of this disease is possible.⁶

The school-age and young adult population is well immunized as a result of the major campaigns of the early 1960's and the school admission requirement. The preschool age population, especially in lower socio-economic and ethnic minority groups, is less well protected.⁸ Physicians are urged to do all possible to ensure adequate poliomyelitis immunization among their pediatric patients.

Rubella

More than 70 percent of the one- to twelve-year-old population in California has now been immunized against rubella.¹¹ Since many of the programs were conducted within recent months,

morbidity figures do not yet reflect the full impact of this effort. Public programs have focused upon the pediatric population as their target with the objective of reducing potential exposure of pregnant women to the disease. A second objective, necessarily more appropriate for the individualized assessment possible in private physicians' offices, is the immunization of non-pregnant, rubella-susceptible females of child-bearing age.¹² Physicians are urged to immunize their pediatric patients and also to immunize susceptible women of child-bearing age if the necessary precautions regarding pregnancy can be assured.

Combined Vaccines

Convenience in the administration of the various live-virus vaccines has been increased by the availability of combined vaccines. Available combinations are: mumps-rubella, rubeola-rubella, and mumps-rubeola-rubella. The licensed combinations have been found to be highly effective and decrease the cost and effort of immunization to both physician and patient.¹³ When patients request one vaccine, the physician may wish to consider a combined vaccine for additional protection as appropriate to the circumstances. The combined vaccines are particularly appropriate for children in the preschool age group, since large numbers of this group will have neither natural nor artificial immunity against either rubella, rubeola, or mumps.

A particular problem exists with regard to rubeola and rubella since the term "measles" has been popularly used for both of these diseases. Many parents are unsure as to which type of "measles" vaccine their child has had. It is recommended that the combined rubeola-rubella or mumps-rubeola-rubella vaccine be used for preschool children to avoid confusion.

Available Resources

Assistance for immunization activities is available from local health departments, many of which have projects funded under the Immunization Assistance Program. All local health departments receive vaccines through this statewide program. These include poliomyelitis, measles, rubella, and measles-rubella vaccines. These vaccines are also available, through the local health departments, to private physicians who agree to use them only for children through the age of

12 years at no charge for the vaccine. Project funded vaccines are also available, upon the request of the physician in charge, to neighborhood health centers and other community-oriented health facilities.

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